UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,538	02/11/2002	Rahoul Puri	02453.0005.NPUS00	5233

7590 12/09/2005	**EXAMINER**
Michael K. Lindsey	NGUYEN, HANH N
Howrey Simon Arnold & White	

ART UNIT	PAPER NUMBER
2668	

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DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Application filed on 2/11/02*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

/HANH NGUYEN/ PRIMARY EXAMINER

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/15/02*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

Claims 8 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

In claims 8 and 19, it is not clear what is meant by "generating an exception response" .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United
States before the invention thereof by the applicant for patent, or on an international application by another who
has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention
thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

Claims 1-6 and 12-17 are rejected under 35 USC 102(e) as being anticipated by Kloth (US Pat. 6,549,961 B1).

In claims 1 and 12, Kloth discloses a network switch including a plurality of processing engines (fig.1, multiprocessor system 20 comprises a bridge 24 and crossbar 80) comprising receiving a request for a connection at the network switch (fig.2, bridge 24 receives an access request from a processor 22 at block 40); assigning a semaphore to the connection (granting a semaphore 32 corresponding to an access request at block 46); storing the semaphore at the processing engines (storing semaphore in memory of bridge 24, see col.3, lines 30-32); at one of the processing engines, receiving an internal message including a semaphore value (within a data access address received, a portion of address correspondences to a requested resource 28 is founded, see col.3, lines 55-60); comparing the stored semaphore to the semaphore value (bridge 24 examines a portion of data access address to determine to which resource 28 the access request is intended, then bridge 24 examines sephamore 32 corresponding to the requested resource 28 to determine if the requested resource 28 is available in block 44, see col.3, lines 59-65); and at the one of the processing engines, processing the internal message based on the comparison of the stored semaphore and the semaphore value (the access is grantedto processor 22 if the requested resource 28 is available, otherwise, request from processor 22 is denied with a halt signal 34, see col.3, line 64 to col.4, line 3).

In claim 13, Kolth disclose a FIFO memory for storing sephamores assignable to connections (resources allocable to processors 22 is based on FIFO requests from processor 22, see col.4, lines 25-30).

In claims 2 and 14, Kloth discloses pre-loading a memory with a plurality of semaphores

assignable to connections (semaphores 32 are stored in memory, see col.3, lines 30-32).

In claims 3 and 15, the limitation of this claaim has been addressed in claim 1.

In claim 4, Kloth discloses de-allocating resources assigned to the connection if the

stored semaphore is equal to the semaphore value (a resource 28 assigned to a processor 22 is

released by bridge 24 if a sephamore 32 corresponds to a released resource 28, see col.4, lines

20-26).

In claims 5 and 16, Kolth discloses the semaphore is a generation count (semaphore 32

may be count semaphore, see col.3, lines 18-22).

In claims 6 and 17, Kolth has disclosed the storing generation count in the memory as

shown in claim 5. Kolth further discloses terminating the connection (if the requested resource

28 is not available, processor 22 is recorded and halt signal 34 is transmitted to the processor 22

to suspend the execution, see col.3, line 64 to col.4, line 15);

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 7 and 18 are rejected under 35 USC 103(a) as being unpatentable over Kloth (US

Pat. 6,549,961 B1).

In claims 7 and 18, Kolth discloses, in col.4, lines 22-27, as the processor 22 requests to

release the resource, the released resource 28 is updated as "free". Kolth further discloses a

memory storing sephamores 32. But Kolth does not disclose returning the incremented

generation count to a FIFO memory so that the incremented generation count is assignable to a

subsequentlyly received connection request. It would have been obvious to return the resouce

equivalent to the generation count to the FIFO memory so that the generation count is assignable

to subsequent connection resquest.

Claims 9-11 are rejected under 35 USC 103 (a) as being unpatentable over Ooba et al.

(Pat. 5,528,761).

In claim 9, Ooba et al. discloses a method of processing a packet received by a switch

having a plurality of processors (fig.6A, processing a message command received at processors

2,3 and 4, see col.6, lines 3-7) comprising at an origination processor (processor 1, fig.6A)

passing the internal message to another of the processors passing the internal message to another

of the processors (fig.6A, processor 1 sends a message command to processors 2, 3 and 4, see

col.6, lines 3-7); performing processing operations relating to the packet at the another of the

processors based on the internal message (each processor checks its condition for receiving the

message, see col.6, lines 5-8); and returning to the origination processor a response (processor 3

receives the message and sends back an ACK (a response) to processor 1) and including the

semaphore for indicating that the processing operations are completed (processor 1 observes the

ACK from the processor 3 and determines which of the processors are ready for receving the

message which , in this case, is the processor 3. Therefore, the processor with the label "3" is the

sephamore received at the the processor 1) see col.6, lines 10-15.

Even though the message command of Ooba et al. does not include an assigned

sephamore, but the message command designates one or more destination processors (col.6, lines

3-5). Therefore, it would have been obvious equate assigning a sephamore to an internal message with designate one designation processor in the Ooba et al. in order to determine whether the destination processor is ready to receive message.

In claims 10 and 11, the limitation of this claim has been addressed in claim 9.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Perks (US pat. 6532487 B1) discloses Method and system for managing semaphores in an objecte-oriented multi-tasking computer system.

Fujiyama (US pat. 6,839,811 B2) discloses Semaphore management circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8:30 to 4:30. The examiner can also be reached on alternate
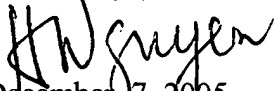
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan, can be reached on 571 272 3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh   Nguyen

December 7, 2005

HANH NGUYEN
PRIMARY EXAMINER